Legal & General

How L&G Pulled Group Data Sciences Under One Umbrella with Data Automation

Industry: Insurance

Location: London, United Kingdom

Employees: 6,500

Solutions: WhereScape® 3D, WhereScape® RED, SQL Server, DB2, Exasol, Snowflake

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— Will Mealing
Head of Data & Analytics, Legal & General

Challenge

L&G's various data management and architecture departments made up a fragmented technical landscape using outdated tools and methodologies. This resulted in little reliability, traceability or re-usability of the technical and data architecture, and so there were no consistent methods for provisioning standardised data of known quality to consumers.

The demand for data had increased, with the stages of requirement analysis, business buy-in, design and development taking too long. At one point the data team created around 600 reports to different points of the organization. L&G's infrastructure was not able to support this and a backlog was growing, so the company had to pay for external resources to manage the overflow.

The marketing database was populated and updated using SAS ETL on DB2. Its design was not optimised for end user self-service and it does not record a history of data changes in the source — it was refreshed and overwritten weekly with no historical analytic capabilities.

> *"The main advantage of WhereScape is that the load of data into our target database is around five times quicker. Loading from a mainframe database took around three and a half hours before and had lots of failures. Now we use Federation through WhereScape which takes an hour, but we're not getting any failures and we're loading a lot more data as well. The marketing database build that took a full week now takes eight hours, which is just incredible."*
>
> **– Steve Slade**
> Legal & General

This refresh was done by an external company using ETL and took a full week to run, from Monday to Sunday night. If anything went wrong there would be a couple of days' downtime for the ETL and end-users and meant that staff such as Steve Slade, Development Manager at L&G, would have to work on the weekend to get it back up and running.

Governance practises such as documentation and code release traceability were manual and error-prone, while the speed and effectiveness of skills transfer were constrained by a lack of consistency in development patterns and standards.

L&G data infrastructure needed modernising if the company was to realise its data-driven goals. In 2019, L&G sold its General Insurance business division and needed to move away from a shared SSIS infrastructure, which provided the ideal time to switch to an automated framework.

L&G wanted to reduce the time and money they were expending on multiple SAS ETL licenses and enable historical analysis across all divisions. The company also needed to reduce the time to value for delivery of new requirements to the business and to reduce their backlog without relying on external resources.

Solution

Director of Group Data Sciences at L&G, Peter Jackson, had a plan to unite all activities under a consistent, standardised framework with automation at its core. The aim was to increase collaboration, transparency and trust with the business and to fully document all processes to avoid a reliance on individual skillsets and tribal knowledge.

L&G wanted to grant teams the flexibility to work on the databases that suit them and not to be locked into any tools or platforms. Some teams would continue to work with on-premises DB2, while others would suit a switch to Exasol or Snowflake with the ability to migrate data architectures from one platform to another as required and not be locked in long term.

WhereScape was invited in for a proof of concept over four days using L&G's own data to demonstrate the speed of automated, templated ELT flows over manual ETL processes.

The success criteria were:

1. Design and develop a data warehouse in under three days that provides end-users with the ability to analyse policy data by business area, person and so on.

2. Source data from files extracted from DB2.

3. Fully document the solution end-to-end.

Most of the work due for completion over three days was done on day one, which impressed two of L&G's Senior Developers who would be using the tool. Another feature of the POC that impressed L&G but was not in their criteria was that it was carried out on Snowflake, demonstrating elastic cloud capabilities and also WhereScape's ability to seamlessly migrate to Snowflake.

Steve said: "I did a lot of research before buying WhereScape and looked at tools like SnapLogic, Informatica and Talend. The thing that sold me on WhereScape was the automated documentation element. I was really, really impressed with that. I knew WhereScape was going to be a lot quicker than SAS because it was purely ELT. I also like the templates. I like that you can pick a database and regenerate the code for that database if you want to switch."

Will Mealing, Head of Data & Analytics at L&G, said: "Compared to other software we were looking at, WhereScape was loading data five or six times faster."

L&G onboarded WhereScape and launched an ambitious four-year data warehouse modernisation plan, using automated ELT to move data rather than outdated, manual ETL tools.

👍 Results

L&G decided to buy an enterprise WhereScape license, which allows unlimited users throughout the company on WhereScape 3D and WhereScape RED. Today around 20 data engineers use WhereScape across several lines of business, with further rollouts planned.

Today data engineers use WhereScape 3D to scope and prototype models for approval by the business instead of spending days or weeks building frameworks as they did before. Then WhereScape RED enables them to load and schedule tables much faster. As Will says, "It's like having five people with only really two people working on it."

Steve elaborates: "The main advantage of WhereScape is that the load of data into our target database is around four times quicker. Loading from a mainframe database took around three and a half hours before and had lots of failures. Now we use Federation through WhereScape which takes an hour, but we're not getting any failures and we're loading a lot more data as well. The marketing database build that took a full week now takes eight hours, which is just incredible.

"It's less hands-on now it's automated, as it should be. I was working stupid hours before, there were times when I was monitoring all weekend. Now we're spending time on what we should be doing rather than supporting things that should be working on their own."

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Prior to WhereScape, L&G didn't have the ability to track data lineage forwards or backwards, which WhereScape enables them to do. Now data can be mapped and automatically documented all through its journey from source to target.

While Data Automation gives the technical advantages that L&G required, the real legacy that WhereScape produced was a complete change in mindset. "WhereScape will force you to think differently," said Will. "Your acceleration is huge once you rework how you historically have done things."

"WhereScape has really opened our eyes. We were limited on what we could do before but now we can deliver what the customer really wants rather than having to compromise because of the limitations of our tools. WhereScape has enabled us to use PowerShell and we can do almost anything with that," said Steve.

The savings in time and effort mean that data teams are more productive and can take more work on from the business, allowing the company to hit long-term targets faster. This of course then increases trust in IT. "WhereScape provides a solid foundation and rich metadata that can be extrapolated to other aspects of the business," said Will. "It's hard to gauge the complete cost-

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effectiveness of WhereScape considering how widely it has flourished within the company."

A holistic Data Automation strategy now binds L&G's various data science groups together, unifying siloed methodologies and ways of thinking. Teams already using WhereScape have been asked to demo to other teams, so there is a real cross-pollination effect. Today divisions such as Group Finance are looking to switch to WhereScape and Snowflake given the success they have seen other teams having with this combination.

About WhereScape

WhereScape helps IT organizations of all sizes leverage automation to design, develop, deploy, and operate data infrastructure faster. More than 700 customers worldwide rely on WhereScape automation to eliminate hand-coding and other repetitive, time intensive aspects of data infrastructure projects to deliver data warehouses, vaults, lakes and marts in days or weeks rather than in months or years.